Gigabit Rate IP Security (GRIP)

Sponsored By: DARPA
Performed By: University of Southern California/
Information Sciences Institute (USC/ISI)

Gigabit Rate IPsec (GRIP) is a research project to enable end-to-end secure communications at Gigabit data rates using the IETF IP Security Protocol.

GRIP is developing innovative methods based on pipelined processing of IP packets in programmable hardware to achieve Gigabit rate cryptographic processing.

The GRIP architecture consists of a COTS workstation and a PCI-based hardware assist board, which includes an onboard network interface card.

Key technical issues include:

- Sustained Gigabit rate IP communications that overcomes PCI system bus, memory, and CPU bottlenecks
- Dynamic management of configurable hardware assist
- Integration with automated security association and key exchange protocols
- Accelerate public key crypto processing to allow scaling of key exchange
- An open platform for high speed network security research

USC INFORMATION SCIENCES INSTITUTE

George Mason University

DARPA

www.east.isi.edu/GRIP

University of Southern California/
Information Sciences Institute (USC/ISI)
Arlington, VA

GRIP Demonstration Contacts

Jarda Flidr
University of Southern California/
Information Sciences Institute (USC/ISI)
3811 North Fairfax Drive, Suite 200
Arlington, Virginia 22203
(703) 812-3710
Fax: (703) 812-3712
jflidr@isi.edu

Tom Lehman
University of Southern California/
Information Sciences Institute (USC/ISI)
3811 North Fairfax Drive, Suite 200
Arlington, Virginia 22203
(703) 812-3736
Fax: (703) 812-3712
tlehman@isi.edu

Peter Bellows
University of Southern California/
Information Sciences Institute (USC/ISI)
3811 North Fairfax Drive, Suite 200
Arlington, Virginia 22203
(703) 812-3701
Fax: (703) 812-3712
pbellows@isi.edu

Brian Schott
University of Southern California/
Information Sciences Institute (USC/ISI)
3811 North Fairfax Drive, Suite 200
Arlington, Virginia 22203
(703) 812-3722
Fax: (703) 812-3712
bschott@isi.edu